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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/568,082 | 02/13/2006 | Abdulsalam Al-Mayahi | 66307361 | 8059 |

25269 7590 03/27/2008

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| EXAMINER |
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NGUYEN, HOANG M

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| ART UNIT | PAPER NUMBER |
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3748

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03/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/568,082 | Applicant(s) AL-MAYAH ET AL. | |
| | Examiner Hoang M. Nguyen | Art Unit 3748 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's amendment dated January 28, 2008, has been fully considered.

Applicant argued Popper et al does not teach step b in claim 1 including the step "transferring the pressure generated in the solution to another liquid to drive the prime mover" and stated that "the pressurized solution in this invention does not directly to drive a prime mover". The Examiner strongly disagrees. Applicant's invention has only two fluids, the solution in the inside (upper chamber of cell 12) of the membrane 18 and the seawater 11 in the outside (lower chamber of cell 12), the influx of seawater 11 mixed with the solution to generate pressure and drive the prime mover 14 (note pages 23-24 of this application). Popper et al discloses exactly the same concept, seawater going through inlet 34 and outlet 36, some mixed with the liquid at the lower chamber 46 to drive the prime mover. Popper et al also uses osmosis cell as taught in this application.

Applicant did not really provide any arguments for the 103 rejections; therefore, the rejections have been maintained. Also, the 103 rejection is based on the 102 rejection in view of Popper et al and Popper et al clearly discloses the claimed invention as clearly set forth above.

The rejections have been maintained as follows.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9-11, 15-16, are rejected under 35 U.S.C. 102(b) as being anticipated by US 4177146 (Popper et al).

Popper et al discloses a power plant comprising osmosis cells 30, 30', 66, 66', 110, 110', having membranes 32, 32', 70, 70', 114, 114', between a liquid (seawater) and a solution having higher osmotic potential than the liquid, to generate pressure for driving prime movers 52, 88, 140, the solution is recovered and separated through nozzle 98 and the salt is going back for recycled to vessel 94.

Regarding claims 3-5, note column 9, lines 30-32, Popper et al discloses the solution that meets the claimed limitations.

Regarding claim 16, please note the fluid in Popper et al has potential energy to drive the prime mover at the lower location.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 3906250 (Loeb) in view of U.S. 4177146 (Popper et al). Loeb discloses a power

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plant comprising chamber 124 for generating pressure for driving a prime mover 126, a distillation plant 130, the solution is recycled back 128. Loeb does not disclose the osmosis cells using membranes. Popper et al discloses a power plant comprising osmosis cells 30, 30', 66, 66', 110, 110', having membranes 32, 32', 70, 70', 114, 114', between a liquid (seawater) and a solution having higher osmotic potential than the liquid, to generate pressure for driving prime movers 52, 88, 140, the solution is recovered and separated through nozzle 98 and the salt is going back for recycled to vessel 94. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use osmosis cell with membranes in Loeb as taught by Popper et al for the purpose of more effectively generating pressures across the chamber. Regarding claims 5-8, 12-14, 17-20, it would have been obvious for a person having ordinary skill in the art to select different types of solutions, methods of distillation, solvent removal, membranes and temperature sources in Loeb for the purpose of generating appropriate power outputs.

Claims 5-8, 12-14, 17-20, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4177146 (Popper et al). Popper et al teaches all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose different solutions, methods of distillation, solvent removal, membranes and temperature sources/levels. However, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to select different types

of solutions, methods of distillation, solvent removal, membranes and temperature sources in Loeb for the purpose of generating appropriate power outputs.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hoang M Nguyen/
Primary Examiner, Art Unit 3748

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
3/28/2008